10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PIP5K3 Antibody (monoclonal) (M01)

Mouse monoclonal antibody raised against a partial recombinant PIP5K3.
Catalog # AT3315a

Product Information

Application	WB, IHC, IF, E
Primary Accession	Q9Y2I7
Other Accession	NM_152671
Reactivity	Human
Host	mouse
Clonality	monoclonal
Isotype	IgG2a Kappa
Clone Names	6C7
Calculated MW	237136

Additional Information

Gene ID	200576
Other Names	1-phosphatidylinositol 3-phosphate 5-kinase, Phosphatidylinositol 3-phosphate 5-kinase, FYVE finger-containing phosphoinositide kinase, PIKfyve, Phosphatidylinositol 3-phosphate 5-kinase type III, PIPkin-III, Type III PIP kinase, PIKFYVE, KIAA0981, PIP5K3
Target/Specificity	PIP5K3 (NP_689884, 342 a.a. ~ 451 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Dilution	WB~~1:500~1000 IHC~~1:100~500 IF~~1:50~200 E~~N/A
Format	Clear, colorless solution in phosphate buffered saline, pH 7.2 .
Storage	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.
Precautions	PIP5K3 Antibody (monoclonal) (M01) is for research use only and not for use in diagnostic or therapeutic procedures.

Background

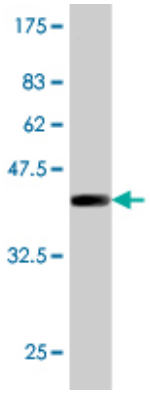
Phosphorylated derivatives of phosphatidylinositol (PtdIns) regulate cytoskeletal functions, membrane trafficking, and receptor signaling by recruiting protein complexes to cell- and endosomal-membranes. Humans have multiple PtdIns proteins that differ by the degree and position of phosphorylation of the inositol ring. This gene encodes an enzyme (PIKfyve; also known as phosphatidylinositol-3-phosphate 5-kinase type III or PIPKIII) that phosphorylates the D-5 position in PtdIns and phosphatidylinositol-3-phosphate (PtdIns3P) to make PtdIns5P and PtdIns(3,5)biphosphate. The D-5 position also can be phosphorylated by type I PtdIns4P-5-kinases (PIP5Ks) that are encoded by distinct genes and preferentially phosphorylate D-4 phosphorylated PtdIns. In contrast, PIKfyve preferentially phosphorylates

D-3 phosphorylated PtdIns. In addition to being a lipid kinase, PIKfyve also has protein kinase activity. PIKfyve regulates endomembrane homeostasis and plays a role in the biogenesis of endosome carrier vesicles from early endosomes. Mutations in this gene cause corneal fleck dystrophy (CFD); an autosomal dominant disorder characterized by numerous small white flecks present in all layers of the corneal stroma. Histologically, these flecks appear to be keratocytes distended with lipid and mucopolysaccharide filled intracytoplasmic vacuoles. Alternative splicing results in multiple transcript variants encoding distinct isoforms.

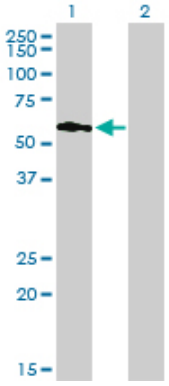
References

1.Critical roles of type III phosphatidylinositol phosphate kinase in murine embryonic visceral endoderm and adult intestine.Takasuga S, Horie Y, Sasaki J, Sun-Wada GH, Kawamura N, Iizuka R, Mizuno K, Eguchi S, Kofuji S, Kimura H, Yamazaki M, Horie C, Odanaga E, Sato Y, Chida S, Kontani K, Harada A, Katada T, Suzuki A, Wada Y, Ohnishi H, Sasaki T.Proc Natl Acad Sci U S A. 2013 Jan 15.2.PIKfyve regulates CaV1.2 degradation and prevents excitotoxic cell death.Tsuruta F, Green EM, Rousset M, Dolmetsch RE.J Cell Biol. 2009 Oct 19;187(2):279-94.

Images

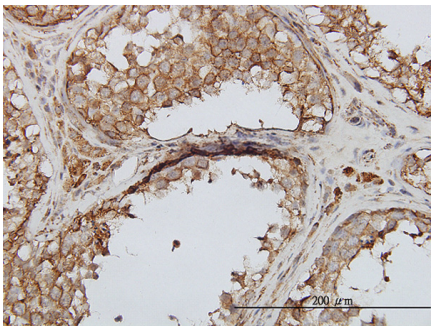


Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (37.84 KDa) .



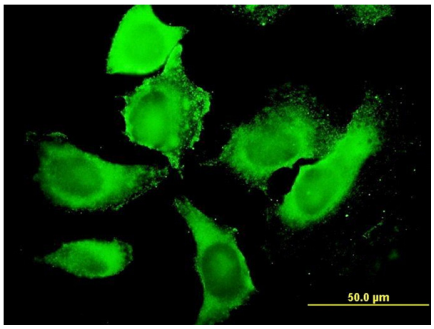
Western Blot analysis of PIP5K3 expression in transfected 293T cell line by PIP5K3 monoclonal antibody (M01), clone 6C7.

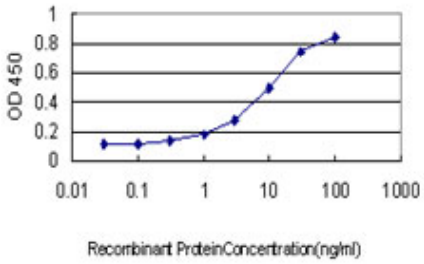
Lane 1: PIP5K3 transfected lysate(50.2 KDa).
Lane 2: Non-transfected lysate.



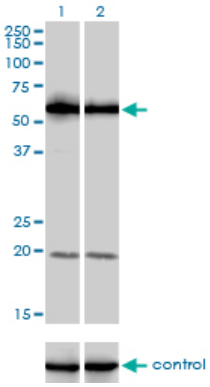
Immunoperoxidase of monoclonal antibody to PIP5K3 on formalin-fixed paraffin-embedded human testis. [antibody concentration 3 ug/ml]

Immunofluorescence of monoclonal antibody to PIP5K3 on HeLa cell. [antibody concentration 10 ug/ml]





Detection limit for recombinant GST tagged PIP5K3 is approximately 0.3ng/ml as a capture antibody.



Western blot analysis of PIP5K3 over-expressed 293 cell line, cotransfected with PIP5K3 Validated Chimera RNAi ((Cat # AT3315a)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.